A.7 Baseline Long-Term Effectiveness Assessment

In October 2003, the San Diego County Copermittees published a collaboration of efforts developed to address long-term effectiveness assessment strategies entitled *A Framework for Assessing the Effectiveness of Jurisdictional Urban Runoff Management Programs.* The document described an iterative process of effectiveness assessment involving program planning, program implementation and effectiveness assessment. There are several key steps to this Long-Term Effectiveness Process which leads to the integrated assessment and planning output used in this Implementation Plan. The Long-Term Effectiveness Process is outlined in Figure 7.

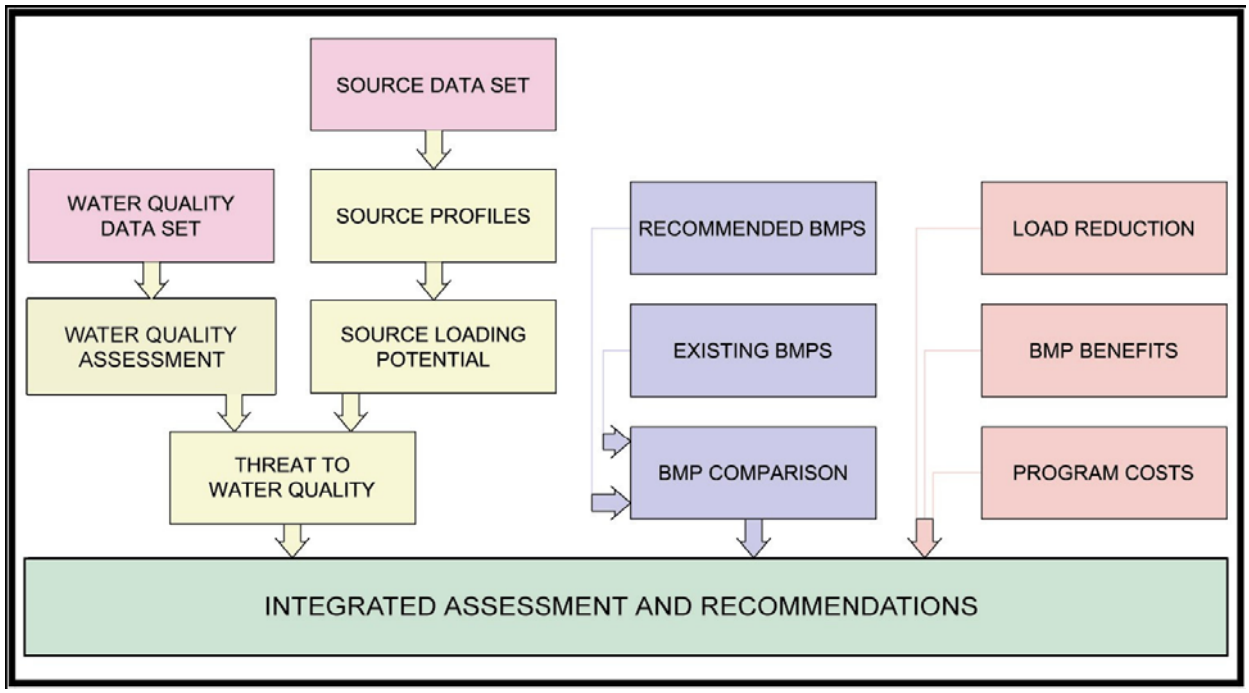

Figure 7. Long-Term Effectiveness Process

The *Baseline Long-Term Effectiveness Assessment* (BLTEA) was completed in 2005 and included water quality analysis and an extensive pollutant source data for the County of San Diego and the Cities of San Diego, La Mesa, and Lemon Grove (Weston, MOE & LWA, 2005). Pollutant specific source lists included in Section 2.0, Tool A of this Implementation Plan to help Dischargers identify the twelve priority sources of pollutants for the Chollas Creek Watershed. The following graphics, data, and analyses were presented in the 2006 *Chollas Creek TMDL Source Loading Assessment, BMP Evaluation, and Recommended Monitoring Strategy Report* (Chollas Creek TMDL Report), and based on the data from the BLTEA report.

A.7.1 Water Quality and Sources of Metals and Hardness

Historical mean wet weather concentrations of total and dissolved copper, lead, and zinc were plotted to show the spatial variability of concentrations (Figure 8 through Figure 13 respectively) in the Chollas Creek Watershed, and its sub-watersheds (yellow delineated areas), with respect to the potential metals point sources from the BLTEA Inventory of Sources. This Inventory is a compilation of information on types of establishments, activities and facilities from numerous

resources to obtain as accurate an estimate as possible of the number of sources throughout San Diego County (Weston, MOE & LWA, 2005). A summary of these resources is shown below:

- Copermittees developed inventories.
- County Department of Environmental Health Hazardous Material Database.
- County Agriculture, Weights & Measures Database.
- County Department of Environmental Health Food and House Database.

As presented on Figure 14, potential sources of metals are generally clustered along main thoroughfares of specifically zoned areas of the Chollas Creek Watershed (i.e., commercial). The location of these clusters of potential sources also correspond to many of the subwatersheds characterized as high for relative annual metals loadings in the upper northwestern drainage area to the north fork, at the confluence of the north and south forks, and along the industrial areas. The source data presented in the BLTEA was based on an estimate of loading potential developed from source profiles and available data from the County of San Diego and the Cities of San Diego, La Mesa, and Lemon Grove on these types of establishments, activities, and facilities.

The historical mean wet weather hardness results for Chollas Creek are illustrated in Figure 15. It is apparent that the hardness concentrations are lower in the northern drainage area of the Chollas Creek Watershed than in the southern drainage area. Figure 15 also indicates the lack of hardness data that is necessary to determine the water quality objective for several of the subwatersheds in the Chollas Creek Watershed.

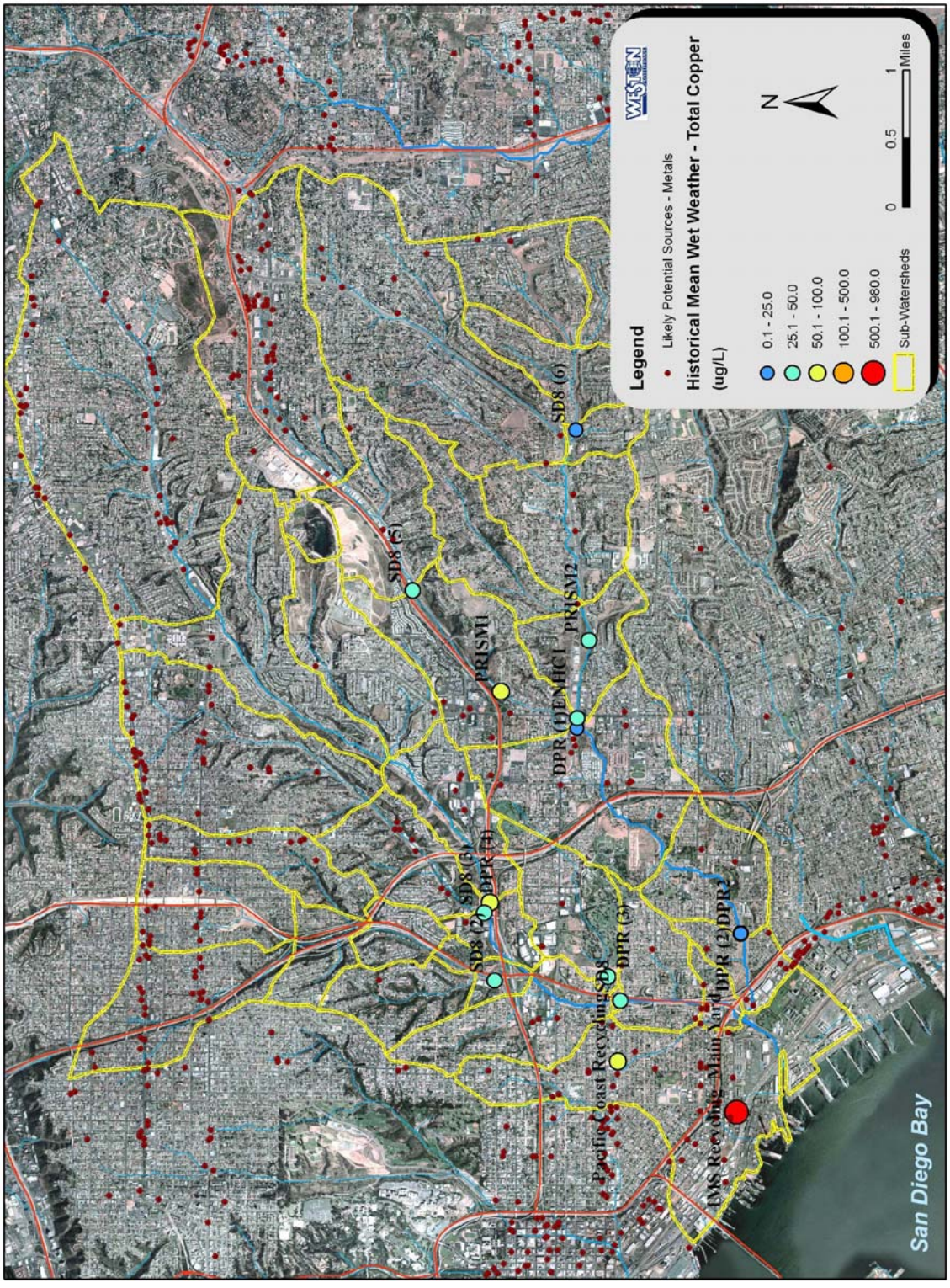

Figure 8. Historical (1994-2005) Mean Wet Weather Results for Total Copper in Chollas Creek Including Potential Metals Source Locations (BLTEA, 2005)

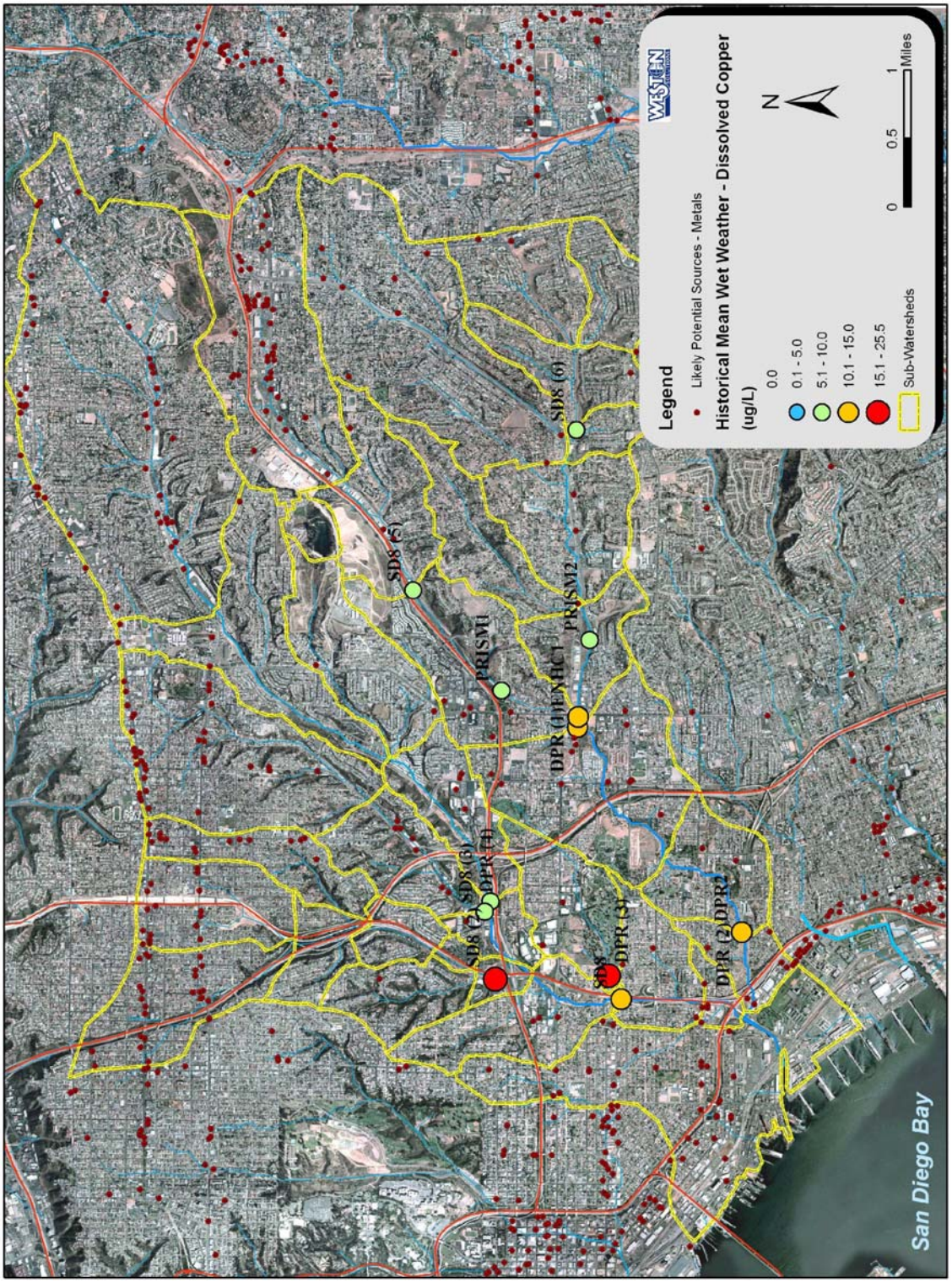

Figure 9. Historical (1994-2005) Mean Wet Weather Results for Dissolved Copper in Chollas Creek Including Potential Metals Source Locations (BLTEA, 2005)

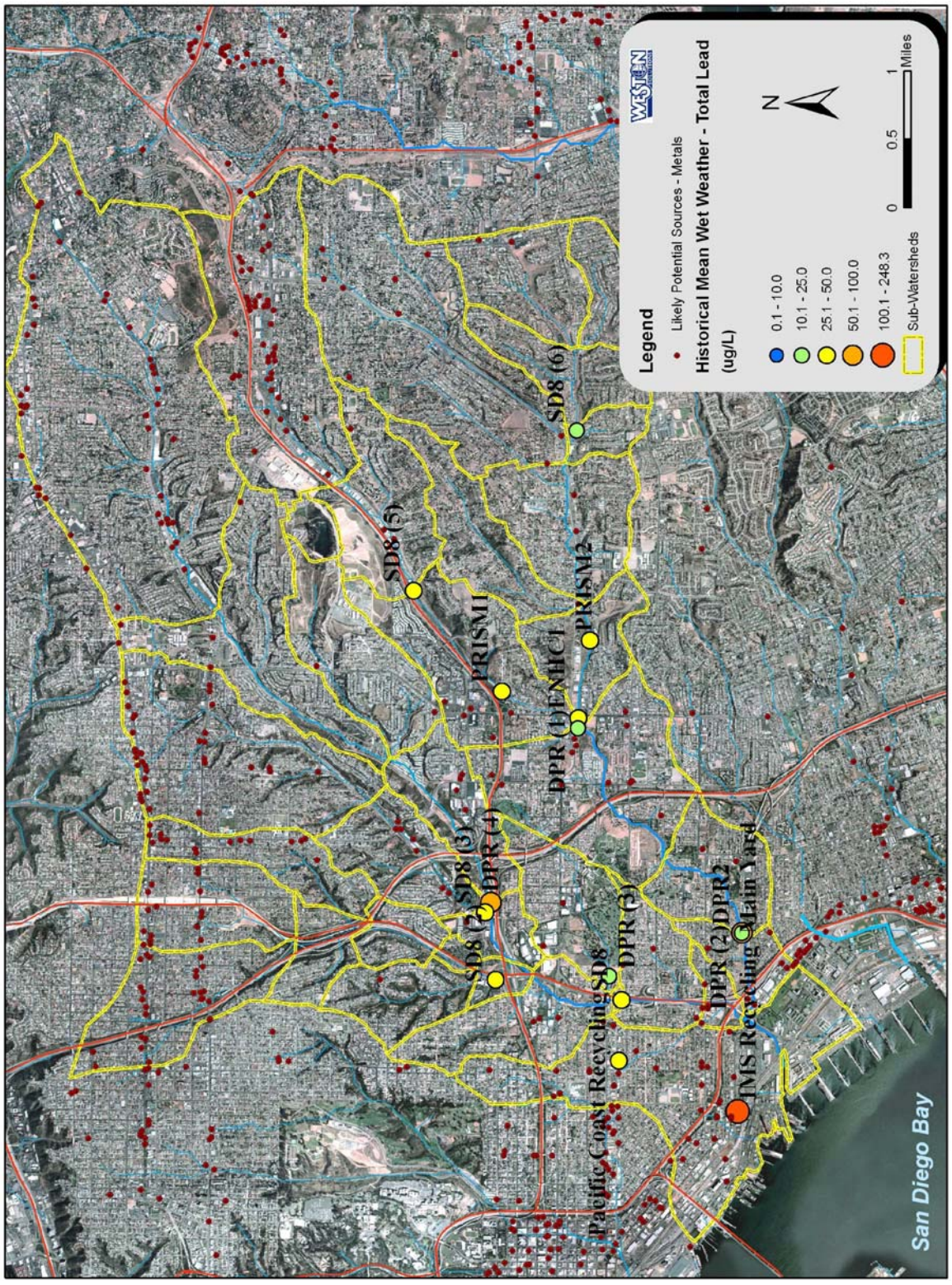

Figure 10. Historical (1994-2005) Mean Wet Weather Results for Total Lead in Chollas Creek Including Potential Metals Source Locations (BLTEA, 2005)

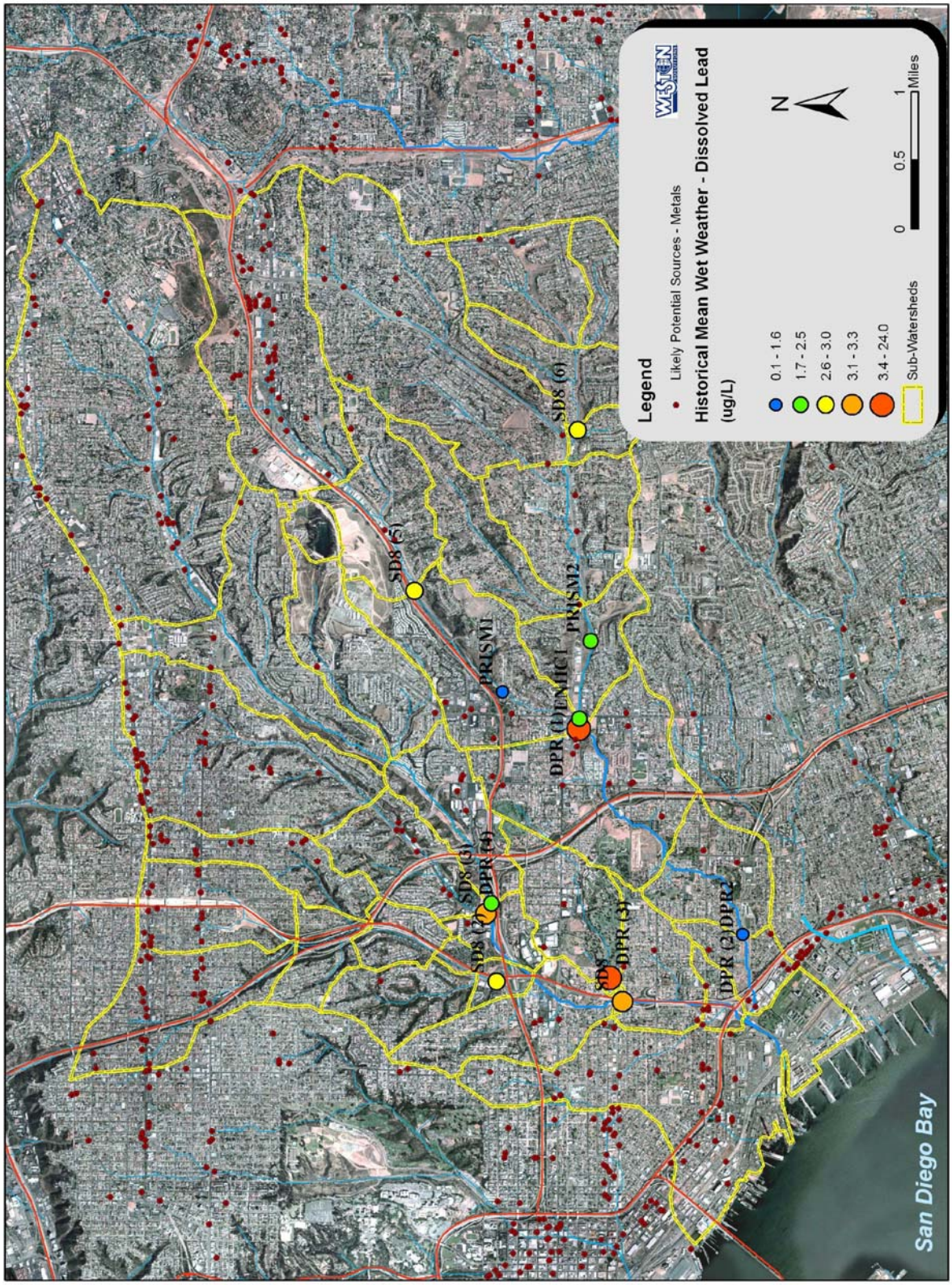

Figure 11. Historical (1994-2005) Mean Wet Weather Results for Dissolved Lead in Chollas Creek Including Potential Metals Source Locations (BLTEA, 2005)

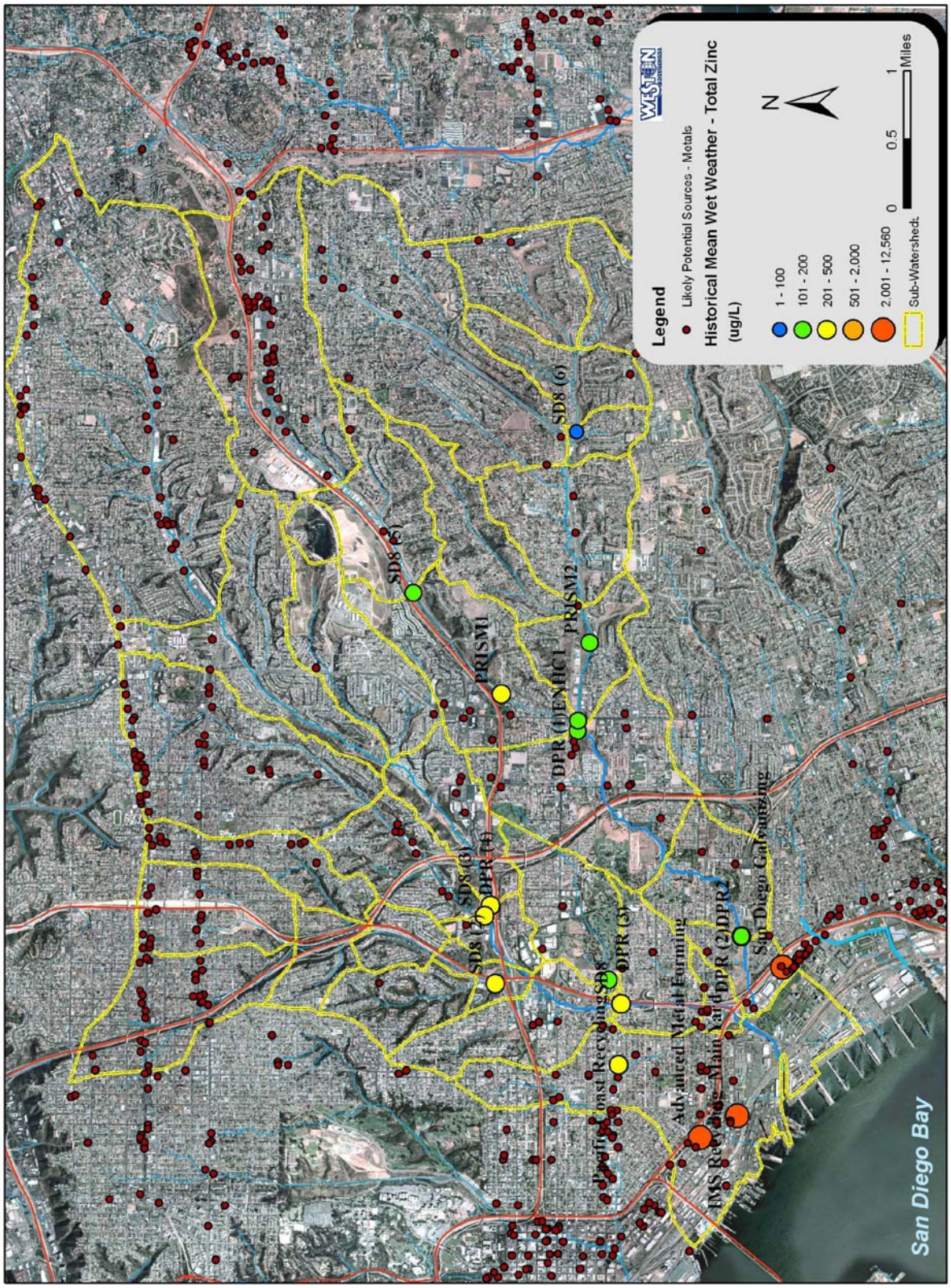

Figure 12. Historical (1994-2005) Mean Wet Weather Results for Total Zinc in Chollas Creek Including Potential Metals Source Locations (BLTEA, 2005)

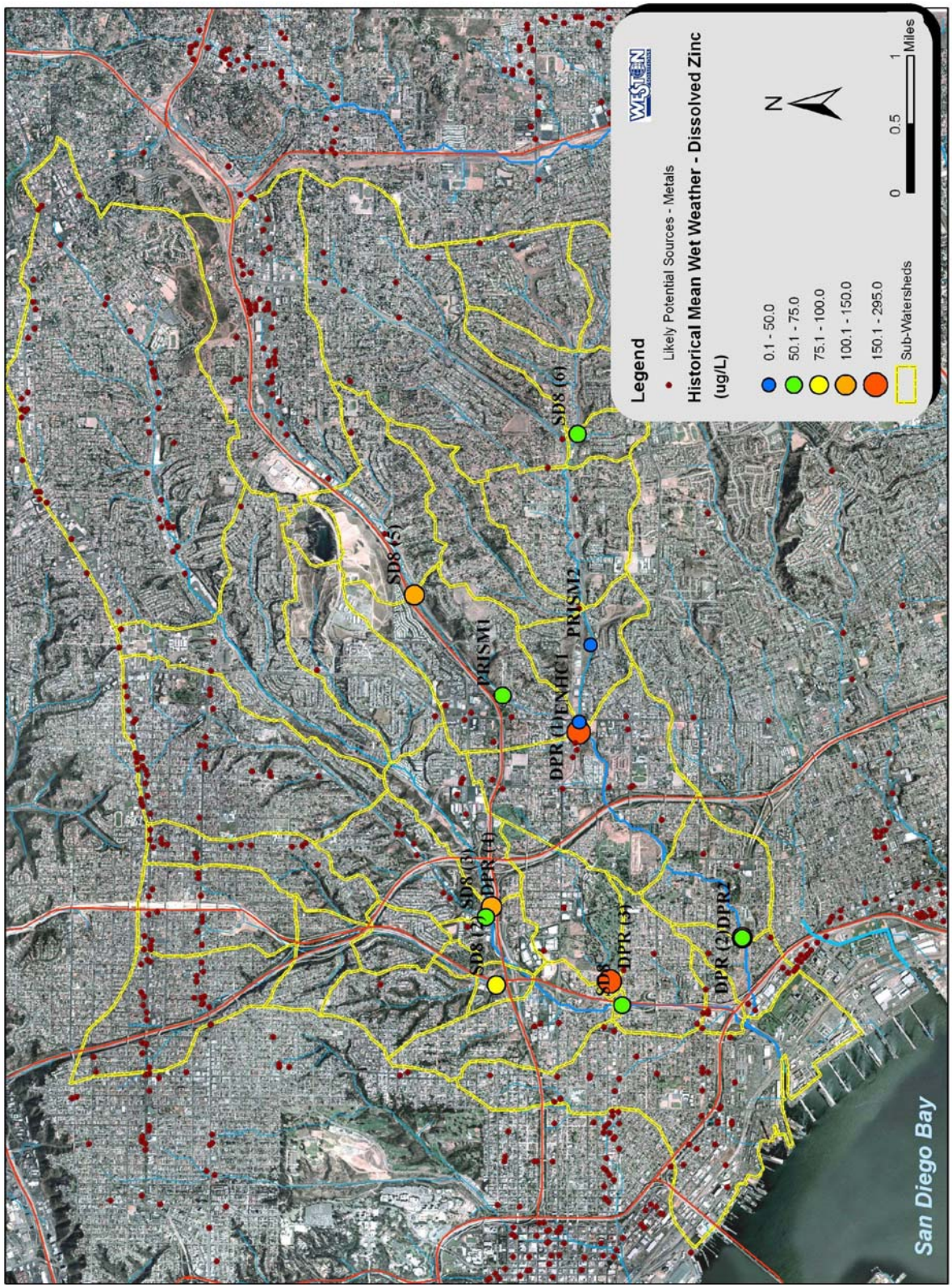

Figure 13. Historical (1994-2005) Mean Wet Weather Results for Dissolved Zinc in Chollas Creek Including Potential Metals Source Locations (BLTEA, 2005)

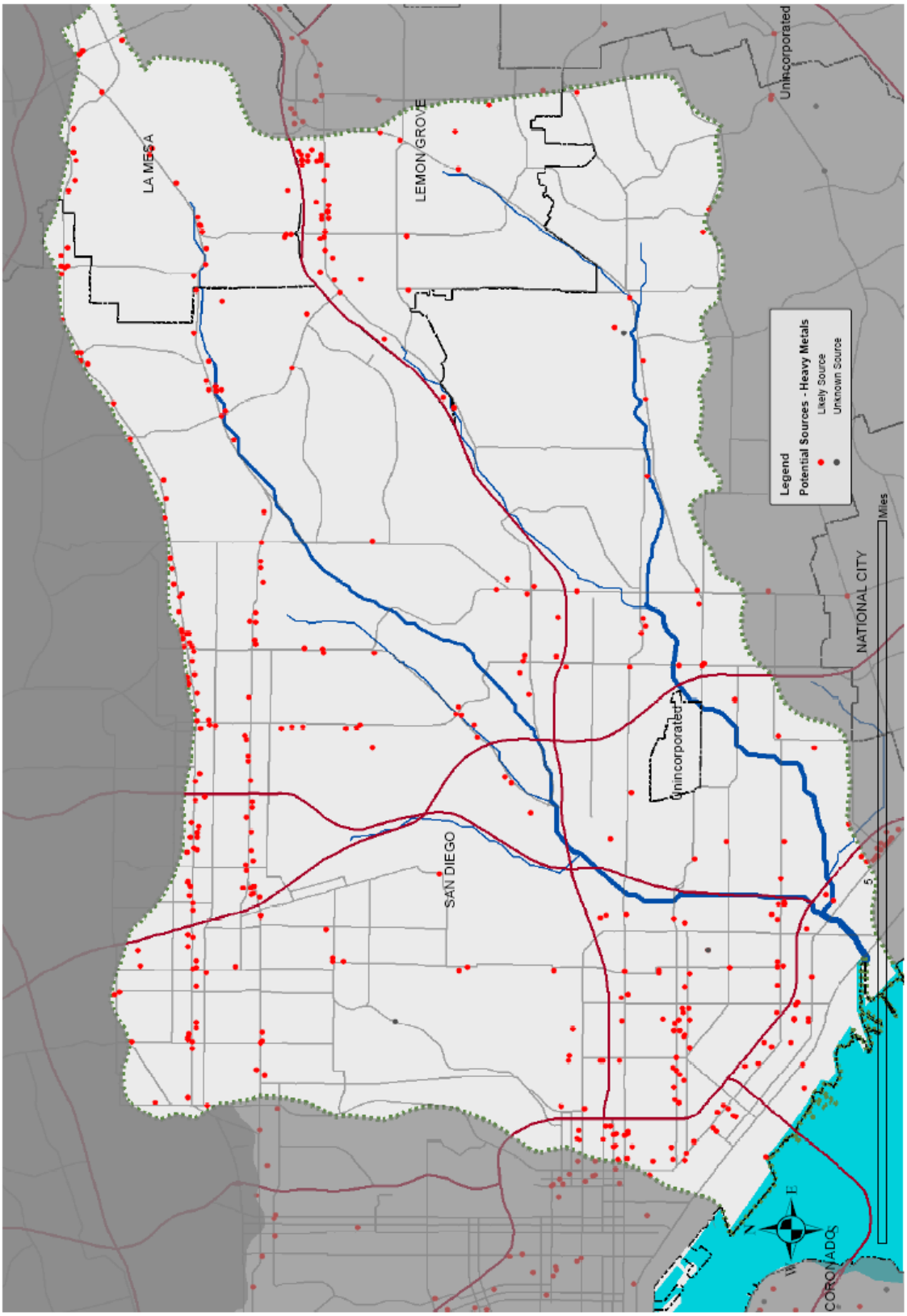

Figure 14. Potential Metals Source Locations in the Chollas Creek Watershed (BLTEA 2005)

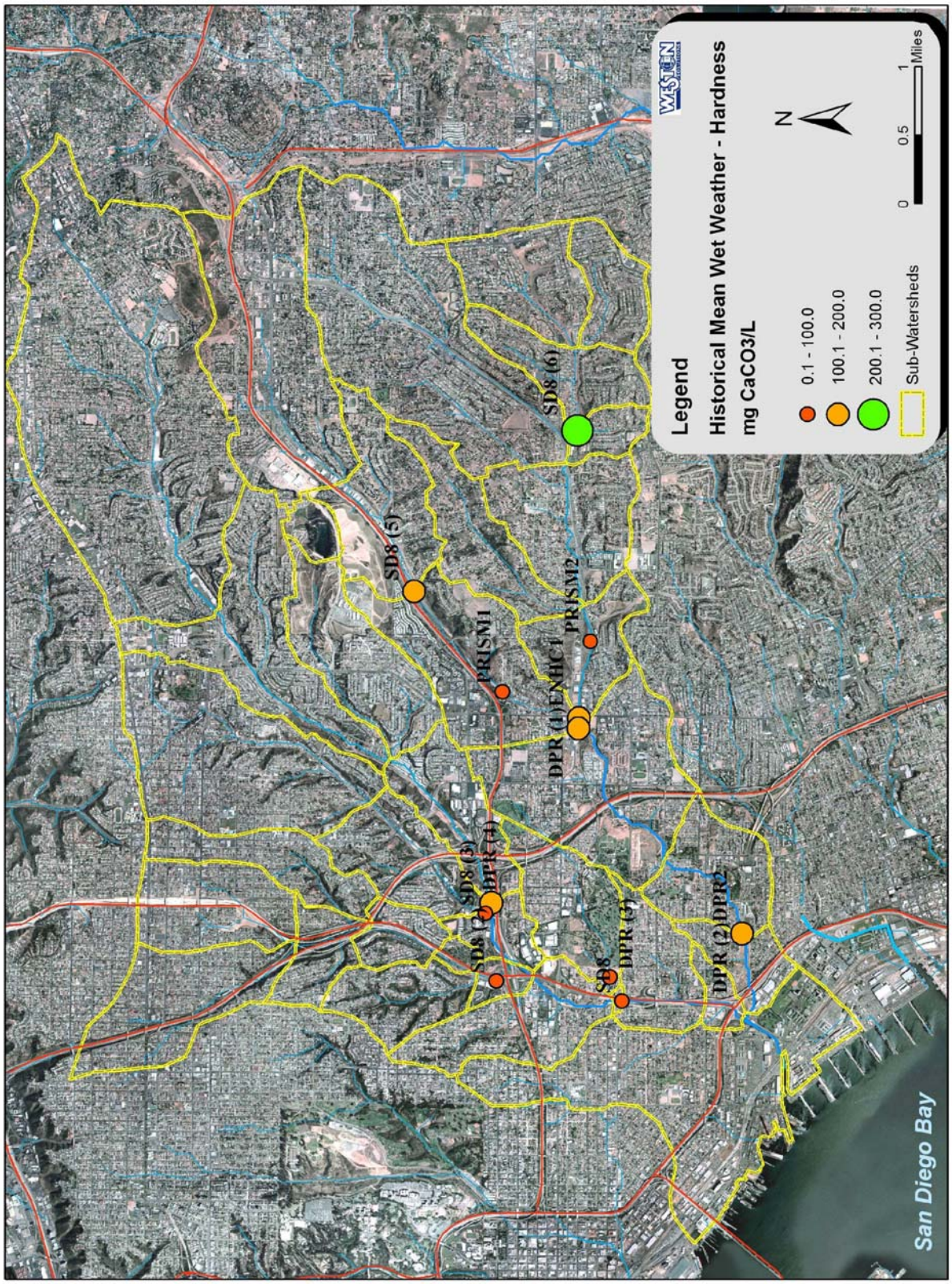

Figure 15. Historical (1994-2005) Mean Wet Weather Results Total Hardness in Chollas Creek. Lower Hardness Results in Lower Metals Water Quality Objective (BLTEA, 2005)